

PHYTOMORPHOLOGY

AN INTERNATIONAL JOURNAL OF PLANT MORPHOLOGY

OFFICIAL ORGAN OF
THE INTERNATIONAL SOCIETY OF PLANT MORPHOLOGISTS

VOLUME 3

1953

NUMBERS 1-4

EDITED BY

P. Maheshwari
University of Delhi
Delhi 8, India

ADVISORY EDITORS

I. W. Bailey
Harvard University
Cambridge 38, Mass., U.S.A.

A. S. Foster
University of California
Berkeley, Calif., U.S.A.

E. J. H. Corner
Botany School
Cambridge, England

H. D. Gordon
Victoria University College
Willington, New Zealand

A. J. Eames
Cornell University
Ithaca, N.Y., U.S.A.

M. O. P. Iyengar
University of Madras
Madras, India

A. Fernandes
Instituto Botanico
Coimbra, Portugal

L. V. D. Pijl
The University
Bandung, Indonesia

Rudolf Florin
Hortus Bergianus
Stockholm, Sweden

M. V. Roscoe
McGill University
Montreal, Canada

C. W. Wardlaw
University of Manchester
Manchester, England



Digitized by the Internet Archive
in 2024

C O N T E N T S

	PAGE
The external morphology of coniferous leaves	D. J. DE LAUBENFELS
Lobed ligules in <i>Selaginella</i>	W. VINK
Independent origin of vessels in the monocotyledons and dicotyledons	VERNON I. CHEADLE
The question of fertilization in <i>Smilacina racemosa</i> (L.) Desf.	ANNE L. GORHAM
Origin and relationships of the Cycads	CHESTER A. ARNOLD
The physical consistency of the endosperm nucleus of <i>Echinocystis macrocarpa</i>	FLORA MURRAY SCOTT
<i>Kyliniella</i> in America	LEWIS H. FLINT
The Durian Theory — A criticism	JOHN PARKIN
The embryology of <i>Zizyphus rotundifolia</i> Lamk.	NIRMAL ARORA
The structure and development of the Caryopsis in some Indian millets — 1. <i>Pennisetum typhoideum</i> Rich.	S. NARAYANASWAMI
Morphologische untersuchungen an den karpellen der Calycanthaceae	VON H. SCHAEPPPI
A new technique for the micro-dissections of embryo sacs of the Santalaceae	R. L. PALIWAL
Embryology of <i>Dioscorea oppositifolia</i> L.	A. NAGARAJA RAO
Edward Charles Jeffrey, 1866-1952	RALPH H. WETMORE and ELSO S. BARGHOORN
Review (of " Morphogenesis in Plants ")	E. BALL
Review (of " Introductory Mycology ")	P. MAHESHWARI
Review (of " Handbook of Basic Microtechnique ")	P. MAHESHWARI
Review (of " Principles of Plant Physiology ")	P. MAHESHWARI
Review (of " The molds and man ")	P. MAHESHWARI
Contribution to the morphology and life history of <i>Acalypha indica</i> L.	B. M. JOHRI and R. N. KAPIL
The construction of Polypores — 1. Introduction: <i>Polyporus sulphureus</i> , <i>P. squamosus</i> , <i>P. betulinus</i> and <i>Polystictus microcyclus</i>	E. J. H. CORNER
Embryologie des Scrophulariacées — Développement de l'albumen et de l'embryon chez le <i>Digitalis purpurea</i> L.	PIERRE CRÉTÉ
Neglected morphology of the palm leaf	ARTHUR J. EAMES
A contribution to the anatomy of the sporocarp of <i>Marsilea minuta</i> L. with a discussion of the nature of sporocarp in the Marsileaceae	V. PURI and M. L. GARG
Some observations on the endosperm in Papilionaceae	M. ANANTASWAMY RAU
Plastic — a suitable embedding substance for petrographic study of coal and fossil plants	S. LECLERCQ and R. NÖEL
Studies on the structure and development of seeds of Cucurbitaceae	BAHADUR SINGH
Studies in Pteridaceae — I. Observations on gametophytes of some species of <i>Adiantum</i> L.	P. KACHROO and B. K. NAYAR

	PAGE
<i>Iyengariella tirupatiensis</i> Gen. et sp. nov. from South India T. V. DESIKACHARY	249
La surévolution chez les Araucariacées H. GAUSSEN	253
The life history of <i>Callitris</i> A. M. BAIRD	258
Interxylary cork and fission of stems and roots E. H. MOSS and ANNE L. GORHAM	285
Embryology of the New Zealand species of the genus <i>Podocarpus</i> , section <i>Eupodocarpus</i> G. BROWNIE	295
On <i>Macrozamia hopeites</i> — an early tertiary cycad from Australia ISABEL C. COOKSON	306
Observation on twin embryo sacs in <i>Sorghum vulgare</i> GEORGE W. JOHNSTON	313
The influence of major mineral nutrient deficiencies on growth and tissue differentiation in the hypocotyl of marglobe tomato, <i>Lycopersicon esculentum</i> Mill. FRANK D. VENNING	315
The embryo sac type in <i>Smilacina</i> , <i>Polygonatum</i> and <i>Theropogon</i> (Liliaceae) HELGE STENAR	326
Morphogenetic studies on <i>Osmunda cinnamomea</i> L.— some aspects of the general morphology TAYLOR A. STEEVES and RALPH H. WETMORE	339
The comparative morphology and relationships of the Magnoliaceae — II. Significance of the pollen JAMES E. CANRIGHT	355
Review (of "General Genetics") P. MAHESHWARI	366
Review (of "The Science of Biology") B. M. JOHRI	366
Review (of "Biologic Science in Laboratory and Field") B. M. JOHRI	367
Review (of "Textbook of Practical Botany") B. M. JOHRI	367
Review (of "Les Gymnospermes vivantes et fossiles, fasc. IV") P. OZENDA	368
On the structure and reproduction of a <i>Compsopogon</i> from Madras V. KRISHNAMURTHY	369
The embryo sac development of <i>Quercus robur</i> L. H. HJELMQVIST	377
<i>Premnoxylon</i> , a new Cordaitean axis RICHARD L. PIERCE and JOHN W. HALL	384
The relationships of the Compositae, particularly as illustrated by the morphology of the inflorescence in the Rubiales and the Campanulatae W. R. PHILIPSON	391
Observations on the Cyrillaceae particularly on the reproductive structures of the North American species HERBERT F. COPELAND	405
Studies in Polypodiaceae — I. Contributions to the morphology of <i>Drynaria</i> Bory: <i>D. quercifolia</i> (L.) J. SM. and <i>D. propinqua</i> (Wall.) J. SM. B. K. NAYAR and P. KACHROO	411
The topography of the nectary in the flower and its phylogenetical trend A. FAHN	424
Comparative histology of secondary xylem in buried and exposed roots of dicotyledonous trees T. M. MORRISON	427
Les caractères histologiques du bois secondaire des Magnoliales ROBERT LEMESLE	430
Development of the embryo sac, endosperm and embryo in <i>Isomeris</i> <i>arborea</i> — a reinvestigation P. MAHESHWARI and REAYAT KHAN	446
The morphology and systematics of the leaves in Ericales O. HAGERUP	459

	PAGE
The Durian Theory extended — I	E. J. H. CORNER
Embryology of <i>Shorea talura</i> Roxb.	465
A. NAGARAJA RAO	476
The life-history of <i>Stackhousia linariaefolia</i> A. Cunn. with a discussion on its systematic position	NIRMAL NARANG
Review (of " Introductory Plant Science ")	485
Review (of " Principles of Weed Control ")	B. M. JOHRI
Review (of " Elements of Plant Protection ")	494
Review (of " Plant Diseases ")	P. MAHESHWARI
Review (of " Pollen Morphology and Plant Taxonomy ")	495
Review (of " Manual of Indian Forest Botany ")	P. MAHESHWARI
	495
	P. MAHESHWARI
	496

